

TABLE 1

**Federal obligations for research and development, by type of R&D, and for R&D plant: FYs 1951–2022**

(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
1951	1,851,571	1,521,527	NA	NA	NA	NA	330,044
1952	2,216,848	1,909,665	NA	120,945	NA	NA	307,183
1953	2,167,456	1,919,543	NA	115,997	NA	NA	247,913
1954	1,918,046	1,761,840	NA	116,033	NA	NA	156,206
1955	2,251,894	2,044,593	NA	130,068	NA	NA	207,301
1956	3,266,903	2,988,203	851,947	206,441	645,506	2,136,256	278,700
1957	4,389,237	3,932,001	924,547	262,348	662,199	3,007,454	457,236
1958	4,906,015	4,569,722	1,078,807	334,543	744,264	3,490,915	336,293
1959	7,122,610	6,693,510	1,340,253	465,981	874,272	5,353,257	429,100
1960	8,080,015	7,551,746	1,872,509	590,374	1,282,135	5,679,237	528,269
1961	9,607,023	9,058,623	2,477,944	814,513	1,663,431	6,580,679	548,400
1962	11,069,059	10,289,947	3,004,795	986,314	2,018,481	7,285,152	779,112
1963	13,662,879	12,494,611	3,507,903	1,151,753	2,356,150	8,986,708	1,168,268
1964	15,323,870	14,225,354	3,874,452	1,303,000	2,571,452	10,350,902	1,098,516
1965	15,745,852	14,614,249	4,247,230	1,435,469	2,811,761	10,367,019	1,131,603
1966	16,178,640	15,320,334	4,660,247	1,579,181	3,081,066	10,660,087	858,306
1967	17,149,186	16,529,099	4,631,390	1,845,847	2,785,543	11,897,709	620,087
1968	16,525,038	15,921,208	4,781,062	1,840,562	2,940,500	11,140,146	603,830
1969	16,309,900	15,640,888	4,644,890	1,944,773	2,700,117	10,995,998	669,012
1970	15,863,385	15,338,937	4,900,798	1,925,908	2,974,890	10,438,139	524,448
1971	16,153,756	15,542,512	5,123,171	1,980,141	3,143,030	10,419,341	611,244
1972	17,097,951	16,495,895	5,547,696	2,186,937	3,360,759	10,948,199	602,056
1973	17,574,486	16,800,153	5,581,429	2,232,006	3,349,423	11,218,724	774,333
1974	18,176,457	17,410,128	6,175,240	2,387,681	3,787,559	11,234,888	766,329
1975	19,859,548	19,038,818	6,729,708	2,588,427	4,141,281	12,309,110	820,730
1976	21,616,382	20,779,658	7,619,332	2,767,454	4,851,878	13,160,326	836,724
1977	24,817,577	23,450,377	8,514,115	3,258,640	5,255,475	14,936,262	1,367,200
1978	27,140,849	25,845,137	9,606,758	3,698,604	5,908,154	16,238,379	1,295,712
1979	29,620,597	28,145,142	10,535,005	4,192,665	6,342,340	17,610,137	1,475,455
1980	31,386,095	29,830,432	11,597,378	4,674,156	6,923,222	18,233,054	1,555,663
1981	34,589,634	33,103,924	12,212,780	5,041,295	7,171,485	20,891,144	1,485,710
1982	37,822,363	36,432,589	13,022,185	5,481,605	7,540,580	23,410,404	1,389,774
1983	40,009,032	38,711,537	14,253,525	6,260,131	7,993,394	24,458,012	1,297,495
1984	44,012,149	42,224,865	14,978,773	7,067,359	7,911,414	27,246,092	1,787,284
1985	50,180,369	48,359,565	16,133,421	7,818,682	8,314,739	32,226,144	1,820,804
1986	52,951,181	51,412,364	16,502,199	8,153,076	8,349,123	34,910,165	1,538,817
1987	57,099,656	55,253,693	17,940,521	8,942,425	8,998,096	37,313,172	1,845,963
1988	58,826,512	56,769,425	18,650,145	9,473,618	9,176,527	38,119,280	2,057,087
1989	63,571,605	61,406,484	20,765,531	10,602,011	10,163,520	40,640,953	2,165,121
1990	65,831,189	63,559,471	21,622,364	11,285,593	10,336,771	41,937,107	2,271,718
1991	64,147,951	61,295,152	23,968,377	12,170,794	11,797,583	37,326,775	2,852,799
1992	68,577,184	65,592,590	24,490,598	12,489,864	12,000,734	41,101,992	2,984,594
1993	70,414,697	67,314,025	26,890,497	13,399,121	13,491,376	40,423,528	3,100,672
1994	69,450,776	67,235,390	27,411,209	13,523,476	13,887,733	39,824,181	2,215,386
1995	70,442,935	68,186,798	28,434,396	13,877,031	14,557,365	39,752,402	2,256,137
1996	69,399,164	67,653,047	28,259,764	14,464,035	13,795,729	39,393,283	1,746,117
1997	71,753,430	69,826,779	29,365,289	14,941,892	14,423,397	40,461,490	1,926,651
1998	73,913,988	72,100,724	30,922,269	15,613,012	15,309,257	41,178,455	1,813,264
1999	77,386,368	75,340,622	33,527,514	17,443,653	16,083,861	41,813,108	2,045,746
2000	80,403,169	75,910,322	38,470,630	19,569,849	18,900,781	37,439,692	4,492,847
2001	88,562,350	84,492,522	44,713,736	21,958,136	22,755,600	39,778,786	4,069,828

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(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
2002	98,013,347	93,708,604	48,006,711	23,668,345	24,338,366	45,701,893	4,304,743
2003	107,794,188	103,527,670	51,071,843	24,751,441	26,320,402	52,455,827	4,266,518
2004	116,068,604	112,074,452	53,357,811	26,120,663	27,237,148	58,716,641	3,994,152
2005	122,619,584	118,848,457	53,738,245	27,140,335	26,597,910	65,110,212	3,771,127
2006	123,854,731	121,729,949	53,535,650	26,584,592	26,951,058	68,194,299	2,124,782
2007	129,431,246	127,262,861	54,093,565	26,865,786	27,227,779	73,169,296	2,168,385
2008	129,049,945	127,106,084	53,893,678	27,153,966	26,739,712	73,212,406	1,943,861
2009	144,758,103	141,090,091	63,691,872	32,879,357	30,812,515	77,398,219	3,668,012
2010	146,967,800	140,354,521	63,727,973	31,795,342	31,932,631	76,626,548	6,613,279
2011	139,703,281	135,532,585	58,064,824	29,313,593	28,751,231	77,467,761	4,170,695
2012	140,670,243	138,524,568	61,986,310	30,958,893	31,027,417	76,538,258	2,145,676
2013	127,625,544	125,720,395	59,532,626	29,779,404	29,753,222	66,187,769	1,905,149
2014	132,778,962	130,561,320	63,191,428	31,587,903	31,603,525	67,369,892	2,217,642
2015	131,578,341	128,753,285	63,825,444	31,527,071	32,298,373	64,927,841	2,825,055
2016	118,273,784	115,832,794	67,104,649	32,292,659	34,811,990	48,728,145	2,440,989
2017	121,626,565	118,974,799	69,871,308	33,271,490	36,599,818	49,103,491	2,651,766
2018	133,277,540	129,424,802	74,587,573	36,195,128	38,392,445	54,837,230	3,852,737
2019	146,800,654	142,424,207	81,117,784	40,017,258	41,100,526	61,306,422	4,376,448
2020	173,552,852	167,402,781	85,304,757	41,546,622	43,758,135	82,098,024	6,150,070
2021	194,433,926	190,151,487	86,244,258	42,494,145	43,750,114	103,907,229	4,282,438
2022 (preliminary)	193,551,003	189,058,891	88,464,235	43,790,457	44,673,778	100,594,656	4,492,112

NA = not available; data were not collected at this level of detail.

**Note(s):**

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020, 2021, and 2022 obligations include additional funding provided by supplemental COVID-19 pandemic-related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.